N.B. Nagaraj

BRUHAT BANGALORE MAHANAGARA PALIKE

Office of the Executive Engineer, Hebbal Division, JC Nagar main road, Bangalore.

REGARDING QUALITY CONTROL - CERTIFICATE

On verification of quality control test reports available in the file and also from inspection report of Technical Team Deployed for this purpose generally the work executed is satisfactory. Compliance of quality control test report as per MORT&H at this stage is not - feasible since this work was executed 2 (Two) (as case may be) years back.

Name: of work: Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No. 18

Assistant Engineer
Ward No. 18

Assistant Executive Engineer,
Hebbal Sub-Division,
BBMP.

Executive Engineer,
Hebbal Division,
BBMP

3/6/15

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.18/NBN/CEMENT/2013-14

Date: 22.06.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. N. B. Nagaraj,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.
REFERENCE	:	EE/H/AE/WO/36/2013-14 Dated: 20.06.2013
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	144 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	480 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.00 %	-

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

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Job No.: CTCE/BBMP/W.No.18/NBN/SAND/2013-14 : 22.06.2013

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. N. B. Nagaraj,** Contractor, Bangalore.

Name of Work : Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/36/2013-14 Dated: 20.06.2013

Date of Testing : 22.06.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	85	4.25	4.25	95.8	90-100
2.36	206	10.30	14.55	85.5	75-100
1.18	499	24.95	39.50	60.5	55-90
600 Micron	432	21.60	61.10	38.9	35-59
300 Micron	489	24.45	85.55	14.5	8-30
150 Micron	223	11.15	96.70	3.3	0-10

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Job No.: CTCE/BBMP/W.No.18/NBN/AGG/2013-14 : 22.06.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. N. B. Nagaraj,** Contractor, Bangalore.

Name of Work : Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/36/2013-14 Dated: 20.06.2013

Date of Testing : 22.06.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25100**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	995	3.96	3.96	96.04	95-100
20	15642	62.32	66.28	33.72	30-70
10	5685	22.65	88.93	11.07	10-35
4.75	2250	8.96	97.90	2.10	0-5

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Job No.: CTCE/BBMP/W.No.18/NBN/CUBE/2013-14 26.07.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	: Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/36/2013-14 Dated: 20.06.2013
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	28.06.2013	26.07.2013	8.425	374.6	16.65
2	28.06.2013	26.07.2013	8.235	352.2	15.65
3	28.06.2013	26.07.2013	8.387	361.4	16.06

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Job No.: CTCE/BBMP/W.No.18/NBN/STEEL/2013-14 25.06.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	:	Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/36/2013-14 Dated: 20.06.2013
Date of Test	:	25.06.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	544	13.05	O.K	O.K

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Job No.: CTCE/BBMP/W.No.18/NBN/STEEL/2013-14 25.06.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	:	Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/36/2013-14 Dated: 20.06.2013
Date of Test	:	25.06.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	548	13.30	O.K	O.K

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Job No.: CTCE/BBMP/W.No.18/NBN/CUBE/2013-14 30.07.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	: Construction of Drain parallel to railway line in Basaveshwara Layout in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/36/2013-14 Dated: 20.06.2013
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.07.2013	30.07.2013	8.145	479.2	21.30
2	02.07.2013	30.07.2013	8.264	485.6	21.58
3	02.07.2013	30.07.2013	8.399	510.4	22.68

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